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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,530	11/20/2003	Klaus Ingemann Pedersen	60091.00250	6858

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EXAMINER	
GESESSE, TILAHUN	
ART UNIT	**PAPER NUMBER**
2618	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/716,530	PEDERSEN, KLAUS INGEMANN	
	Examiner	Art Unit	
	Tilahun B. Gesessse	2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 November 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,6-9 and 14-17* is/are rejected.

7)☒ Claim(s) *2-5 and 10-13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *11/20/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1,6-9,14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pietraski (US 2004/0142698) in view of Choi et al (Choi) (US 2004/0022213).

Claim 1 , Pietraski teaches a method of controlling link adaptation in a packet radio system, (see abstract) and page 1, paragraph 0003-0006) comprising:

Pietraski teaches receiving a CQI report, the CQI report including a number of multi-codes, a transport block size, and a modulation scheme to be used in link adaptation (see page 1, paragraph 0003-0006 and figure 1), in which receives the downlink data transmission and makes selective measurements based on transport block size and modulation scheme on plurality of coded blocks of data.

Pietraski teaches the transport block size, based on a ratio of the number of multi-codes of the CQI report (see page 1, paragraph 0005) and the number of multi-codes available for transmission, and executing link adaptation based on new estimates for the effective code rate, and the transport block size, (see page 3, paragraph 0030-0034) in which the WTRU makes selective CQI measurement regarding downlink data transmission and drives the current CQI and determines the predictive CQI in which the past measurement combined with current CQI measurement to derive a predictive CQI.

In this regard, the past CQI and the current CQI compares to report predictive CQI to the node B and the predictive CQI is set parameter for next transmission.

Pietraski does not teach a number of multi-codes of the CQI report exceeds a number of multi-codes available for transmission calculating new estimates for the effective code rate, based on the received CQI report and parallel multi-code of the CQI report. However, Choi teaches an apparatus for determining channel quality indicator (CQI) report cycles for user equipment upon receiving CQI information from the UE s in HSDPA service from a node B (see abstract and page 1, paragraph 0006), Choi, further more, teaches transmits a high level modulation scheme such as 16-QAM and a channel coding scheme having a high coding rate and low modulation scheme such as QPSK and a channel coding scheme having a low coding rate (see page 10, paragraph 0109), in which effective coding rate and modulation scheme applied based on channel quality report. Therefore, it would have been obvious to an ordinary skill in the art at the time of the invention was made to calculate the effective code rate from modulating techniques based on CQI report, in Pietraski system, as evidenced Choi, in order to improve overall utilization efficiency of a network by adaptively determining modulating and coding level according to a channel condition between a user equipment and a serving network.

Claims 6-8, Pietraski does not teach selecting the modulation scheme to be used in link adaptation based on the received CQI report, the modulation scheme being QPSK or 16QAM modulation scheme.

Choi, further more, teaches transmits a high level modulation scheme such as 16-QAM and a channel coding scheme having a high coding rate and low modulation scheme such as QPSK and a channel coding scheme having a low coding rate (see page 10, paragraph 0109), in which effective coding rate and modulation scheme applied based on selection of modulation scheme. Therefore, it would have been obvious to an ordinary skill in the art at the time of the invention was made to calculate the effective code rate from modulating techniques based on CQI report, in Pietraski system, as evidenced Choi, in order to improve overall utilization efficiency of a network by adaptively determining modulating and coding level according to a channel condition between a user equipment and a serving network.

Claim 9. Pietraski teaches a packet radio system in a packet radio system, (see abstract) and page 1, paragraph 0003-0006) comprising:

Pietraski teaches receiving a CQI report, the CQI report including a number of multi-codes, a transport block size, and a modulation scheme to be used in link adaptation (see page 1, paragraph 0003-0006 and figure 1), in which receives the downlink data transmission and makes selective measurements based on transport block size and modulation scheme on plurality of coded blocks of data.

Pietraski teaches the transport block size, based on a ratio of the number of multi-codes of the CQI report (see page 1, paragraph 0005) and the number of multi-codes available for transmission, and executing link adaptation based on new estimates for the effective code rate, and the transport block size, (see page 3, paragraph 0030-0034) in which the WTRU makes selective CQI measurement regarding downlink data

transmission and drives the current CQI and determines the predictive CQI in which the past measurement combined with current CQI measurement to derive a predictive CQI. In this regard, the past CQI and the current CQI compares to report predictive CQI to the node B and the predictive CQI is set parameter for next transmission.

Pietraski does not teach a number of multi-codes of the CQI report exceeds a number of multi-codes available for transmission calculating new estimates for the effective code rate, based on the received CQI report and parallel multi-code of the CQI report. However, Choi teaches an apparatus for determining channel quality indicator (CQI) report cycles for user equipment upon receiving CQI information from the UE s in HSDPA service from a node B (see abstract and page 1, paragraph 0006), Choi, further more, teaches transmits a high level modulation scheme such as 16-QAM and a channel coding scheme having a high coding rate and low modulation scheme such as QPSK and a channel coding scheme having a low coding rate (see page 10, paragraph 0109), in which effective coding rate and modulation scheme applied based on channel quality report. Therefore, it would have been obvious to an ordinary skill in the art at the time of the invention was made to calculate the effective code rate from modulating techniques based on CQI report, in Pietraski system, as evidenced Choi, in order to improve overall utilization efficiency of a network by adaptively determining modulating and coding level according to a channel condition between a user equipment and a serving network.

Claim 14-16, Pietraski does not teach selecting the modulation scheme to be used in link adaptation based on the received CQI report, the modulation scheme being QPSK or 16QAM modulation scheme.

Choi teaches an apparatus for determining channel quality indicator (CQI) report cycles for user equipment upon receiving CQI information from the UE s in HSDPA service from a node B (see abstract and page 1, paragraph 0006), Choi, further more, teaches transmits a high level modulation scheme such as 16-QAM and a channel coding scheme having a high coding rate and low modulation scheme such as QPSK and a channel coding scheme having a low coding rate (see page 10, paragraph 0109), in which effective coding rate and modulation scheme applied based on channel quality report. Therefore, it would have been obvious to an ordinary skill in the art at the time of the invention was made to calculate the effective code rate from modulating techniques based on CQI report, in Pietraski system, as evidenced Choi, in order to improve overall utilization efficiency of a network by adaptively determining modulating and coding level according to a channel condition between a user equipment and a serving network.

Claim 17. Pietraski teaches a packet radio system in a packet radio system, (see abstract) and page 1, paragraph 0003-0006) comprising:

Pietraski teaches receiving a CQI report, the CQI report including a number of multi-codes, a transport block size, and a modulation scheme to be used in link adaptation (see page 1, paragraph 0003-0006 and figure 1), in which receives the

downlink data transmission and makes selective measurements based on transport block size and modulation scheme on plurality of coded blocks of data.

Pietraski teaches the transport block size, based on a ratio of the number of multi-codes of the CQI report (see page 1, paragraph 0005) and the number of multi-codes available for transmission, and executing link adaptation based on new estimates for the effective code rate, and the transport block size, (see page 3, paragraph 0030-0034) in which the WTRU makes selective CQI measurement regarding downlink data transmission and drives the current CQI and determines the predictive CQI in which the past measurement combined with current CQI measurement to derive a predictive CQI. In this regard, the past CQI and the current CQI compares to report predictive CQI to the node B and the predictive CQI is set parameter for next transmission.

Pietraski does not teach a number of multi-codes of the CQI report exceeds a number of multi-codes available for transmission calculating new estimates for the effective code rate, based on the received CQI report and parallel multi-code of the CQI report. However, Choi teaches an apparatus for determining channel quality indicator (CQI) report cycles for user equipment upon receiving CQI information from the UE s in HSDPA service from a node B (see abstract and page 1, paragraph 0006), Choi, further more, teaches transmits a high level modulation scheme such as 16-QAM and a channel coding scheme having a high coding rate and low modulation scheme such as QPSK and a channel coding scheme having a low coding rate (see page 10, paragraph 0109), in which effective coding rate and modulation scheme applied based on channel quality report. Therefore, it would have been obvious to an ordinary skill in the art at the

time of the invention was made to calculate the effective code rate from modulating techniques based on CQI report, in Pietraski system, as evidenced Choi, in order to improve overall utilization efficiency of a network by adaptively determining modulating and coding level according to a channel condition between a user equipment and a serving network.

Allowable Subject Matter

3. Claims 2-5,10-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Motorola , Ericsson (April 9-12,2002) teaches parallel of the CQI's for different capabilities in tables 1-3 (CQI , TBS and number of codes modulation and code rate , shown in appendix A).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tilahun B Gesesse whose telephone number is 571-272-7879. The examiner can normally be reached on flexible schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on 571-272-7899.

The Central FAX Number is 571-273-8300. For patent related

correspondence, hand carry deliveries must be made to the Customer Service Window (now located at the Randolph Building, 401 Dulany Street, Alexandria, VA 22314), and facsimile transmissions must be sent to the Central FAX number, unless an exception applies.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TG

12/18/06

TILAHUN GESESSE
PRIMARY EXAMINER